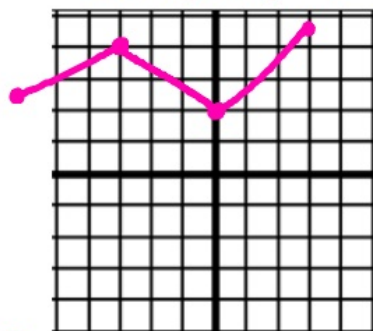
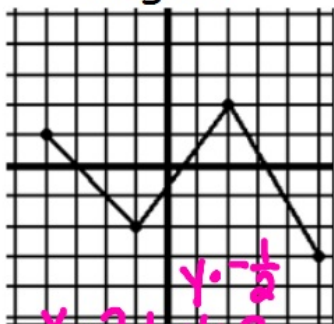


Bellwork: 10/23/12

Perform the indicated transformations:

$a = -\frac{1}{2}$ y value $\cdot -\frac{1}{2}$
 $h = -2$ x value $- 2$
 $-1/2 f(x+2) + 3 \rightarrow k = 3$ y value $+ 3$

original



$x - 2$	$y + 3$
$(-4, 1)$	$(-6, 2.5)$
$(-1, -2)$	$(-3, 4)$
$(2, 2)$	$(0, 2)$
$(5, -3)$	$(3, 4.5)$

Graphing Absolute Value Functions

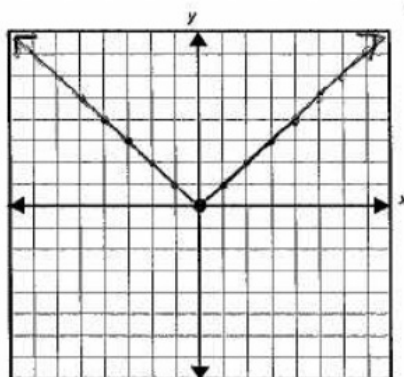
General Function:

$$y = a|x - h| + k$$

where $a =$ _____

$(h, k) =$ vertex

$y = |x|$
vertex: $(0, 0)$
 $a = 1$

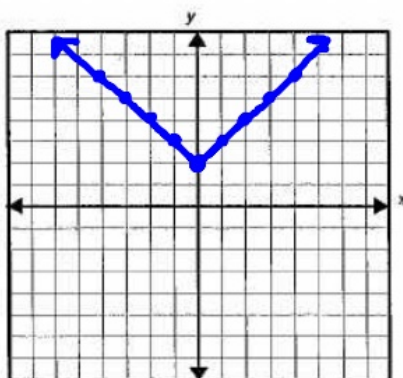


$h = 0$ $k = 2$

1. $y = |x| + 2$

$a = 1$

Vertex = $(0, 2)$

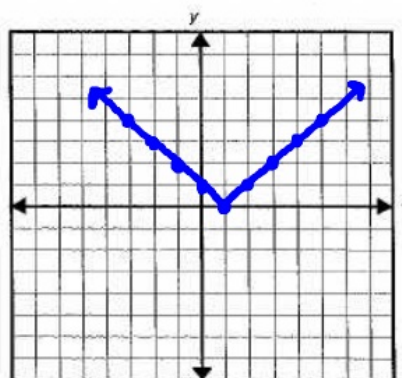


$h = 1$ $k = 0$

2. $y = |x - 1|$

$a = 1$

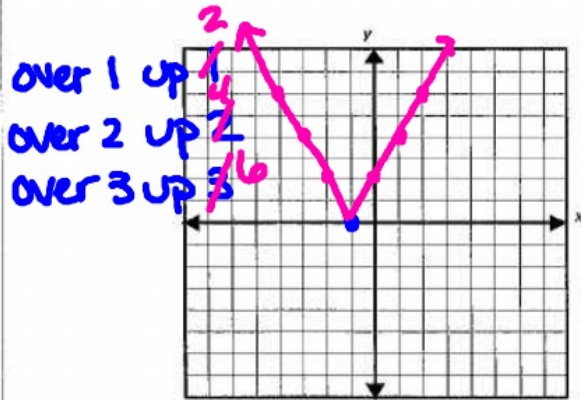
Vertex = $(1, 0)$



$$h = -1 \quad k = 0$$

$$3. \quad y = 2|x+1|$$

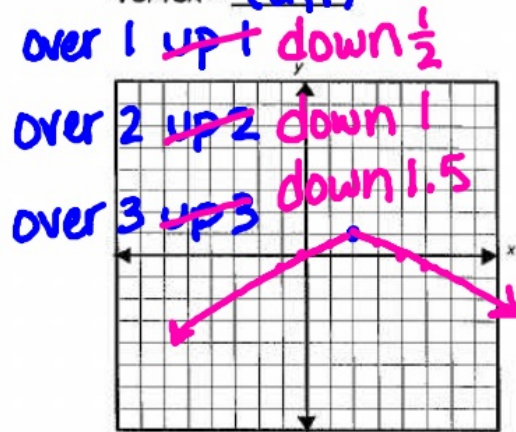
$$a = 2 \quad \text{Vertex} = (-1, 0)$$



$$h = 2 \quad k = 1$$

$$4. \quad y = -\frac{1}{2}|x-2|+1$$

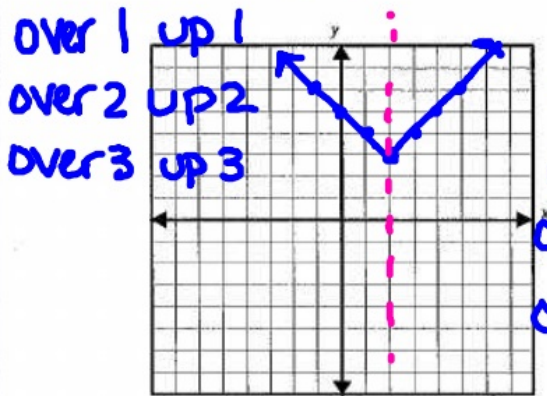
$$a = -\frac{1}{2} \quad \text{Vertex} = (2, 1)$$



$$h = 2 \quad k = 3$$

$$5. \quad y = |x-2|+3$$

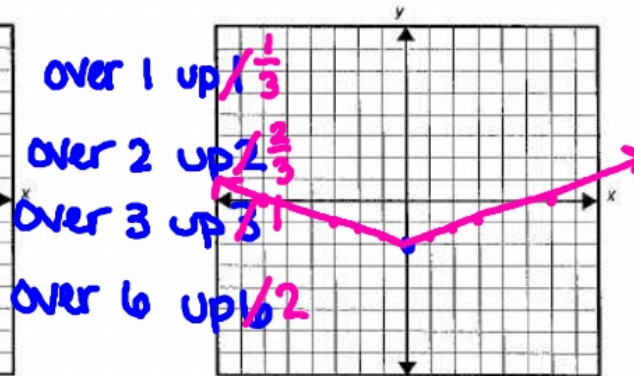
$$a = 1 \quad \text{Vertex} = (2, 3)$$



$$h = 0 \quad k = -2$$

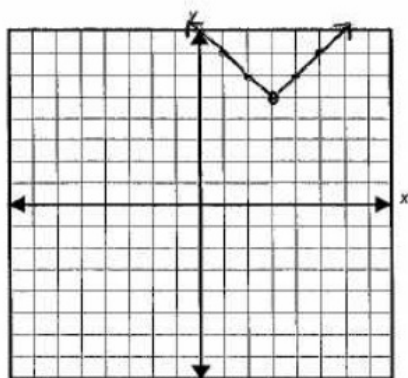
$$6. \quad y = \frac{1}{3}|x|-2$$

$$a = \frac{1}{3} \quad \text{Vertex} = (0, -2)$$

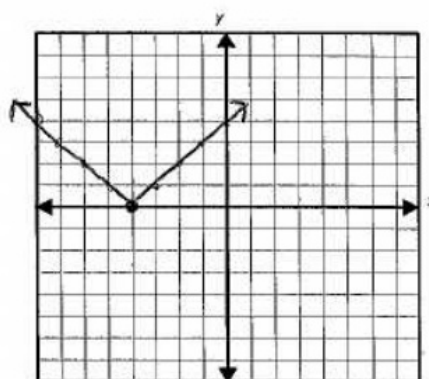


Find the equation of each graph shown below:

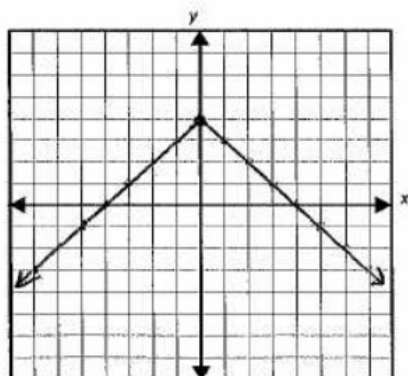
7. _____



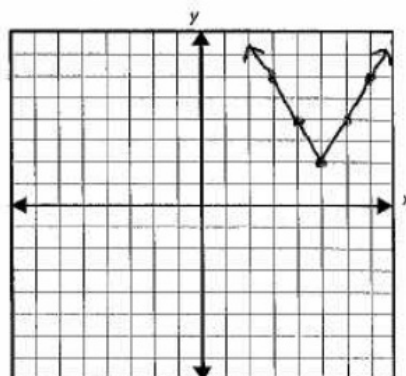
8. _____



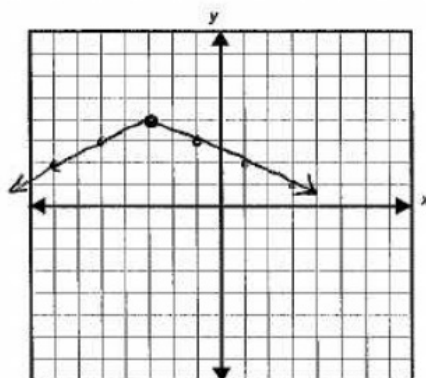
9. _____



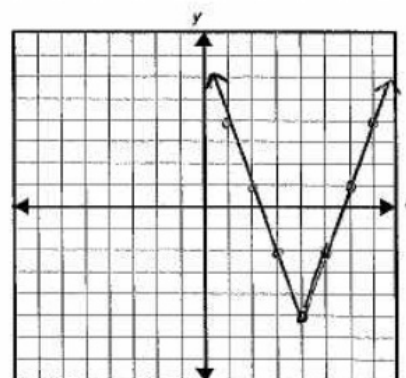
10. _____



11. _____



12. _____



Homework: 10/23/12
graph absolute value
handout 1-12